

<i>Berberis aquifolium</i> Pursh	Oregon holly grape, holly leaved Mahonia
<i>Cleome serrulata</i> Pursh	Rocky Mountain bee-plant
<i>Ribes aureum</i> Pursh	Golden currant
<i>Rubus spectabilis</i> Pursh	Salmonberry
<i>Purshia tridentata</i> (Pursh) DC.	Antelope-brush
<i>Lupinus argenteus</i> Pursh	Silvery lupine
<i>Psoralea esculenta</i> Pursh	Indian breadroot, pomme blanche
<i>Linum lewisii</i> Pursh	Wild flax, prairie flax
<i>Euphorbia marginata</i> Pursh	Snow-on-the-mountain
<i>Acer circinatum</i> Pursh	Vine maple
<i>Acer macrophyllum</i> Pursh	Big-leaved maple, Oregon maple
<i>Ceanothus sanguineus</i> Pursh	Northern buckbrush, snowbrush
<i>Sphaeralcea coccinea</i> (Pursh) Rydb.	Scarlet mallow, copper mallow
<i>Clarkia pulchella</i> Pursh	Clarkia
<i>Nicotiana quadrivalvis</i> Pursh	Indian tobacco
<i>Grindelia squarrosa</i> (Pursh) Dunal	Resinweed, gumplant
<i>Balsamorhiza sagittata</i> (Pursh) Nutt.	Balsamroot
<i>Artemisia cana</i> Pursh	Silver sage, dwarf sagebrush

Had a professional botanist accompanied the party, a more complete and important collection might have been made. (Orig-

inally a French botanist, André Michaux, was to have made such a trip but was recalled by his government.) On the other hand, Lewis's specimens and data are as ample, or no more inadequate, than many collections made today by persons with considerable botanical training. The accidental losses of specimens placed in caches would not necessarily have been prevented. Apparently it was understood that Lewis was to avoid collection of material already known, for Jefferson mentions that one of Lewis's qualifications was the fact that he would be "guarded, by exact observation of the vegetables and animals of his own country, against losing time in the description of objects already possessed".<sup>17</sup>

Considering such restrictions and the inconveniences and accidents of the journey, one wonders that so much material resulted.

I wish to express my appreciation to Dr. C. Earle Smith, Jr., of the Academy of Natural Sciences of Philadelphia, for his courtesy and helpfulness in making available the Lewis collections and various pertinent data.

<sup>17</sup> Biddle, op. cit. 1: xii.

## Zoological Contributions of the Lewis and Clark Expedition

By Henry W. Setzer (U. S. National Museum)

The Lewis and Clark expedition was primarily charged with making geographical observations of the country through which it passed in search of a route to the Pacific as well as to evaluate the possibilities of the, then recent, Louisiana Purchase. The secondary charge was to determine the possibilities of trade and the kinds and numbers of people living on the route. Almost as an afterthought was added "other objects worthy of notice," among which was the charge: "The animals of the country generally, and especially those not known in the United States" (Coues, 1893: xxviii).

As a result of this latter charge, the expedition, in spite of the constant press of travel and geographic observations, made a

collection of the larger animals. A shipment to President Jefferson was made on April 4, 1805 from the Lewis and Clark winter camp at the Upper Mandan Village on the Missouri River. It was to be returned to St. Louis, and then dispatched to the President, by some of the original party who had finished their tour of duty. This shipment of crates, bales, and boxes sent to Jefferson contained, in natural-history specimens, "a stuffed male and female antelope with their skeletons, a weasel, three squirrels from the Rocky Mountains [probably Black Hills], the skeleton of the prairie-wolf [coyote], those of the white and gray hare, a male and female blaireau or burrowing dog of the prairie [badger], with a skeleton of the female, two burrowing

squirrels [prairie dog?], a white weasel, the skin of the louservia [bobcat or lynx], the horns of the mountain ram or bighorn, a pair of large elk horns, the horns and tail of the black-tailed deer, and a variety of skins such as those of the red fox, white hare, marten, and a yellow bear obtained from the Sioux" (loc. cit.: p. 250). Other boxes contained Indian articles, plants, insects, and birds. In addition to the preserved material a burrowing squirrel, a prairie-hen and four magpies were sent alive. No report has been found that any of the living animals ever reached St. Louis. Other material was brought by the Expedition when it returned in 1806.

This material was received by Jefferson who kept some of it on display at Monticello and sent the rest of it to Peale's Museum in Philadelphia. The first report, linking the vernacular name as applied by Lewis and Clark with a scientific name, was by George Ord in Guthrie's Geography published in 1815 and based on material in the Peale Museum. The names for mammals proposed by Ord and which are still tenable are: *Ursus horribilis*, grizzly bear; *Arctomys ludovicianus* = *Cynomys ludovicianus*, black-tailed prairie dog; *Arctomys columbianus* = *Citellus columbianus*, Columbian ground squirrel; *Antilope americana* = *Antilocapra americana*, pronghorn; and *Mus cinereus* = *Neotoma cinerea*, bushy-tailed wood rat.

In 1817 Rafinesque in the American Monthly Magazine published descriptions of three more mammals based on the descriptions as given by Lewis and Clark but without ever having seen the specimens. Those were: *Felix (sic) fasciatus* = *Lynx rufus fasciatus*, bobcat; *Anisonyx rufa* = *Aplodontia rufa*, sewellel; and *Cervus hemionus* = *Odocoileus hemionus*, mule deer.

The birds were first studied and reported by Wilson, who named several, which have since proved to be synonyms of earlier existing names. In the same Guthrie's Geography, Ord described *Phasianus columbi-*

*anus* = *Pediocetes phasianellus columbianus*, Columbian sharp-tailed grouse, and *Anas columbianus* = *Cygnus columbianus*, whistling swan. Others described by him at the same time have since proved to be synonyms.

The fate of the Lewis and Clark specimens has been rather tragic. For many years they were on view in the Peale Museum in Philadelphia, but owing to financial difficulty the Museum was sold at auction and the material passed into the hands of P. T. Barnum and others. So far as is known, most, if not all, of the material obtained by Barnum was lost in several disastrous fires. Some of the bird specimens from the old Peale Museum did find their way into the Museum of Comparative Zoology, where they are still extant. This material plus a few types at Vassar and the Academy of Natural Sciences of Philadelphia are all that remains of the Lewis and Clark animals. A paper by Faxon (1915) gives a list of these specimens and comments on their condition. When we consider the time at which the Expedition was made and the difficulty entailed in transportation, it is remarkable that any material was saved and more remarkable that any of it managed to reach the United States for study.

The contributions made by the Lewis and Clark expedition in zoology are remarkably slight when one considers the scope of their geographical and ethnological contributions. It must be borne in mind though that both Lewis and Clark were engineers and that they had no professional zoologist with them on their journey. Had such an individual been along, the contribution to the zoology of what is now the western United States would have undoubtedly been as great as that in geography and ethnology.

#### LITERATURE CITED

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